

I claim:

1. A method to treat a painful joint, muscle, tendon, and/or ligament, comprising the steps of:

applying topically over said painful joint, muscle, tendon, and/or ligament a

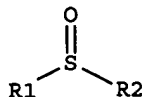
5 therapeutically effective dose of a composition formed by combining:

a first oxidizing agent;

a first polar compound having a dielectric constant greater than about 40, wherein said first polar compound comprises at least 50 weight percent of said composition; and

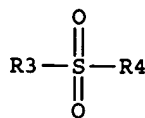
10 a second polar compound having a dielectric constant greater than about 40, wherein said second polar compound comprises more than 20 weight percent of said composition.

2. The method of claim 1, wherein said first polar compound has the structure



wherein R1 and R2 are selected from the group consisting of methyl, ethyl, propyl, n-butyl, s-butyl, t-butyl, and mixtures thereof.

15 3. The method of claim 2, wherein said second polar compound has the structure



wherein R3 and R4 are selected from the group consisting of methyl, ethyl, propyl, n-butyl, s-butyl, t-butyl, and mixtures thereof.

20 4. The method of claim 3, wherein said first oxidizing agent is selected from the group consisting of hydrogen peroxide, ozone, peracetic acid, and mixtures thereof.

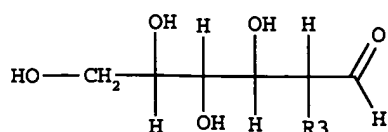
5. The method of claim 3, wherein said composition is formed by further combining:

a first polyol having between three and six carbon atoms and at least three hydroxyl groups; and

a second polyol having between three and six carbon atoms and at least three hydroxyl groups.

5 6. The method of claim 5, wherein said first polyol is selected from the group consisting of ascorbic acid, glycerol, and mixtures thereof.

7. The method of claim 6, wherein said second polyol has the structure



wherein R3 is selected from the group consisting of -OH, -NH₂, -NH₃⁺X⁻, and mixtures thereof,

10 and wherein X⁻ is selected from the group consisting of chloride, bromide, iodide, acetate, propionate, benzoate, and mixtures thereof.

8. The method of claim 7, further comprising a second oxidizing agent.

9. The method of claim 8, wherein said second oxidizing agent is selected from the group consisting of hydrogen peroxide, ozone, peracetic acid, and mixtures thereof.

15 10. The method of claim 6, further comprising a first terpenoid compound.

11. The method of claim 10, wherein said first terpenoid compound comprises a cyclic ether.

12. The method of claim 11, wherein said cyclic ether is selected from the group consisting of 1,4-cineole, 1,8-cineole, and mixtures thereof.

20 13. The method of claim 10, further comprising a second terpenoid compound.

14. The method of claim 13, wherein said second terpenoid compound comprises an alcohol.

15. The method of claim 14, wherein said second terpenoid compound comprises hexahydrothymol..

16. The method of claim 13, further comprising a third terpenoid compound.

17. The method of claim 16, wherein said third terpenoid compound comprises an
5 alkene.

18. The method of claim 17, wherein said alkene is selected from the group consisting of α -pinene, β -pinene, limonene, menthene, citrene, carvene, and mixtures thereof.

19. The method of claim 16, further comprising a fourth terpenoid compound.

20. The composition of claim 19, wherein said fourth terpenoid compound comprises
10 one or more fully saturated hydrocarbons having between about 10 carbon atoms and about 15 carbon atoms, and wherein said fourth terpenoid compound further includes a cyclohexyl moiety.